

REMARKS

The above amendment with the following remarks is submitted to be fully responsive to the Office Action of December 14, 2007. Reconsideration of this application in light of the amendment and the allowance of this application are respectfully requested.

Claims 1-5, 7-15 and 20-37 were pending in the present application prior to the above amendment. In response to the Office Action, claim 1 is amended, claim 20 is canceled, and claims 21-37 are withdrawn. Claim 1 has been amended to include the limitations from canceled claim 20. Therefore, claims 1-5 and 7-15 are now pending in the present application and are believed to be in proper condition for allowance.

Initially, the Applicants acknowledge with appreciation, the Examiner's indication of allowable subject matter in claim 20 if rewritten to overcome the objections set forth in the Office action.

Referring now to the Office Action, claims 1-5, 7-15, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended claim 1 to recite "wherein the conjugate polymer has a repeating unit expressed by the formula (1)". Specifically, the conjugate polymer disclosed in claim 1 is limited to that having the repeating unit represented by formula (1). The amendment is supported in the specification at paragraph [0035], which clearly describes that the polymer disclosed in the present application is a polymer having the polythiophene derivative as a fundamental skeleton. Polythiophene is a polymer having a thiophene unit, such as a structure represented by formula (1), as a repeating unit. Furthermore, the synthetic procedure disclosed in paragraph [0051] shows that the polymer of the present invention is prepared by the oxidative polymerization of the corresponding thiophene. This polymerization method gives only the polymer having the thiophene unit represented in formula (1) as a repeating unit and does not provide a compound that comprises a structure shown in formula (1) as a sole unit. By this amendment, Applicants believe the rejection is overcome.

Claims 1-5, 7, and 13-15 are rejected under 35 U.S.C. 103(a) as obvious over Heuer (U.S. Pat. No. 6,368,731) in view of Andersson et al. (WO 94/02530) in view of Lidberg (Proceedings of SPIE – The International Society for Optical Engineering (1995), 2397, Optoelectronic Integrated Circuit Materials, Physics, and Devices, p. 633-42). Claims 8-11 are rejected under 35 U.S.C. 103(a) as obvious over Heuer in view of Andersson in further view of Lidberg and in further view of Yang (U.S. Pat. No. 5,723,873). Claim 12 is rejected under 35 U.S.C. 103(a) as obvious over Heuer in view of Andersson in further view of Lidberg and in further view of Ara (U.S. Pat. No. 6,613,454). Applicants respectfully traverse.

Applicants note that in amended claim 1, the substituents on the thiophene unit (R^1 and R^2) are limited to those selected from a dialkylamino group, a trialkylsilyl group, and an aromatic substitution group having a substitution group selected from thioalkyl group, a dialkylamino group, and a trialkylsilyl group. As noted by the Examiner, Andersson discloses several substituents in page 4 lines 20-32. However, the substituents listed in Andersson do not include a dialkylamino group, a trialkylsilyl group, and an aromatic substitution group having a substitution group selected from a dialkylamino group, and a trialkylsilyl group. In a similar way, Heuer fails to teach or suggest a polythiophene derivative having two substituents selected from the above-mentioned substituents in every repeating unit. Therefore, the combination of Heuer and Andersson does not teach, disclose, or suggest each and every element of amended claim 1.

Applicants submit that Lidberg fails to teach polythiophene having the formula (1). Similarly, Yang does not show a polythiophene having the substituents recited in amended claim 1. Finally, Ara only generally describes polythiophenes and does not disclose a polythiophene having the substituents recited in amended claim 1.

Because neither Heuer, Andersson, Lidberg, Yang, nor Ara teach all of the elements of amended claim 1, alone or in combination, Applicants respectfully submit that neither Heuer, Andersson, Lidberg, Yang, nor Ara render claim 1 unpatentable. Accordingly, Applicants request the rejection of this claim be withdrawn. Because claims 2-5 and 7-15 depend upon claim 1, Applicants request that the rejection of these claims also be withdrawn, and that claims 1-5 and 7-15 be allowed.

Conclusion

In view of the foregoing, it is submitted that the present application is in condition for allowance and a notice to that effect is respectfully requested. However, if any issue remains after considering this response, the Examiner is invited to call the undersigned to expedite the prosecution and work out any such issue by telephone.

Respectfully submitted,

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